



Publication number: **0 476 945 A1**

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: **91308415.8**

(51) Int. Cl.⁶: **H02G 3/22**

(22) Date of filing: **16.09.91**

(30) Priority: **15.09.90 GB 9020192**

(43) Date of publication of application:
25.03.92 Bulletin 92/13

(84) Designated Contracting States:
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

(71) Applicant: **ENVIRONMENTAL SEALS LIMITED**
Warcott Lodge, Roman Road, Maydensole,
Dover, Kent, CT15 5HR (GB)

(72) Inventor: **Ward, Derek Alfred**
Warcott Lodge, Roman Road, Maydensole
Dover, Kent CT15 5HR (GB)

(74) Representative: **Fry, Alan Valentine et al**
FRY HEATH & SPENCE, St. Georges House, 6
Yattendon Road
Horley, Surrey RH6 7BS (GB)

(54) Fire seals.

(57) A fire seal for use with electrical conduits and fittings therefor comprises a sheet or layer of intumescent material applied to one or more internal surfaces of the fittings or channels through which electrical cables pass. The intumescent material may take the form of a pad or gasket (3,6) typically of between 1.5 and 5.0mm thickness and may be secured to one or more internal walls of the fittings or channels by PVC faced adhesive tape. Preferably, the intumescent material includes a high proportion of graphite to prevent electrical shorting should one or more conducting wires of the cable become exposed.

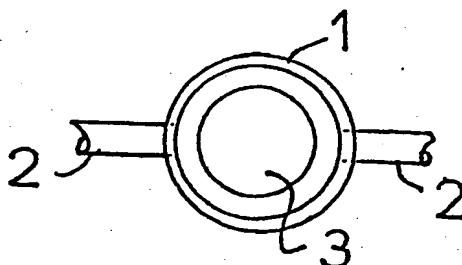


FIG. 1

EP 0 476 945 A1

the true scope of the invention.

Claims

1. A fire seal for use with electrical conduits and fittings therefor, which seal comprises a sheet or layer of intumescent material applied to one or more internal surfaces of the fittings or channels through which electrical cables pass. 5
10
2. A fire seal as claimed in Claim 1 wherein the intumescent material takes the form of a pad or gasket of between 1.5 and 5.0mm thickness. 15
3. A fire seal as claimed in Claim 2 wherein the pad or gasket is between 1.8 and 4.0mm thickness. 20
4. A fire seal as claimed in Claim 3 wherein the pad or gasket is secured to one or more internal walls of the fittings or channels by means of an adhesive layer, for example adhesive tape such as PVC faced adhesive tape. 25
5. A fire seal as claimed in any one of Claims 1 to 4 wherein the intumescent material includes a high proportion of graphite. 30
6. A fire seal comprising a graphite-based intumescent pad or gasket positioned within the interior of a conduit for electrical cabling. 35
7. A fire seal as claimed in Claim 6 wherein the intumescent pad comprises a backing sheet of vermiculite and graphite fibres coated on one or both sides with an intumescent paint or varnish, the intumescent paint or varnish impregnating itself into the fibrous structure of the backing sheet to define a surface which expands in the presence of fire. 40
8. A fire seal as claimed in Claim 6 wherein the intumescent pad comprises a backing sheet produced from ceramic fibres coated on one side with layers of vermiculite granules and intumescent paint or varnish, the intumescent material impregnating into the porous structure of the backing sheet. 45
9. A conduit fitting for electrical cabling, at least one internal surface of the conduit of which is coated with a layer of intumescent material having a thickness which lies within the range 1.5 to 5.0mm. 50
10. A fitting as claimed in Claim 9 in which the intumescent material is of a preferred thickness of between 1.8 to 4.0mm. 55



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number

DOCUMENTS CONSIDERED TO BE RELEVANT			EP 91308415.8
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. CL.5)
X	GB - A - 2 181 093 (MARN MC GOWAN FABRICATIONS LIMITED) * Claims 1,5 *	1-3, 5-7	H 02 G 3/22
A	GB - A - 2 222 916 (FIRE SEAL ENGINEERING AB) * Claims 1,3 *	1,9	
			TECHNICAL FIELDS SEARCHED (Int. CL.5)
			H 02 G 3/00
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
VIENNA		15-11-1991	SCHMIDT
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 01.82 (P.0401)